



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,788	12/05/2003	Hongwei Liu	552-003	2254
1009	7590	12/21/2005		
KING & SCHICKLI, PLLC 247 NORTH BROADWAY LEXINGTON, KY 40507			EXAMINER MANCHO, RONNIE M	
			ART UNIT 3663	PAPER NUMBER

DATE MAILED: 12/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/729,788

Applicant(s)

LIU ET AL.

Examiner

Ronnie Mancho

Art Unit

3663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) 1-22 and 33-38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 23-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/4/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election without traverse of claims 23-32 in the reply filed on 10-13-05 is acknowledged.
2. Claims 1-22, 33-38 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 10-13-05.

### *Claim Objections*

3. Claim 23 is objected to because of the following informalities:

In claim 23, line 3, the applicant is advised to change "trailer articulated together during use," to --trailer, said tractor and trailer articulated together during use,-- for clarity. The applicant is further advised to change "comprising" to -- comprising: -- for clarity. The applicant is further advised to change "on said same angle" to -- on said same side are angled -- for clarity.

4. Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 3663

6. Claims 24, and 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 24, the applicant claims “*about* fifty-six degrees”, and in claim 25, the applicant claims “*about* eighty-three degrees”. These limitations are indefinite. The clause “*about*” does not specifically state the number of degrees the applicant is seeking to protect. That is 45, 50, 51, 55, etc can be considered to be close to or “*about*” 56 degrees by one person, but not by another person.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 23-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Rost (6217177).

Regarding claim 23, Rost (abstract; fig. 10, col. 8, lines 35-46) discloses a transducer bar 5 having a longitudinal extent and a centerline (see where the #5 arrow is pointing at) for attaching to a tractor 1 (figs. 3 & 10) to facilitate in calculations of an angle (col. 13, lines 19+) between said tractor 1 and a trailer 3 articulated together during use, comprising:

a plurality of transducers 6, 7, 8 (fig. 10) arranged substantially symmetrically about said centerline, each transducer having an angular orientation relative to said longitudinal extent

Art Unit: 3663

substantially dissimilar to adjacent transducers on a same side of said centerline (fig. 10, col. 10, lines 53-58), wherein an innermost transducer 8a and an outermost transducer 8b on said same side are angled in opposite directions relative to said centerline.

Regarding claim 24, Rost (abstract; fig. 10, col. 8, lines 35-46) discloses the transducer bar of claim 23, wherein said angular orientation of said outermost transducer is about fifty-six degrees (col. 10, lines 53-58).

Regarding claim 25, Rost (abstract; fig. 10, col. 8, lines 35-46) discloses transducer bar of claim 23, wherein said angular orientation of said innermost transducer is about eighty-three degrees.

Regarding claim 26, Rost (abstract; fig. 10, col. 8, lines 35-46) transducer bar of claim 23, wherein said angular orientation of said innermost transducer is substantially larger than said angular orientation of said outermost transducer.

Regarding claim 27, Rost (abstract; fig. 10, col. 8, lines 35-46) transducer bar of claim 23, wherein an intermediate transducer between said innermost transducer and said outermost transducer angles in a same direction as said outermost transducer.

Regarding claim 28, Rost (abstract; fig. 10, col. 8, lines 35-46) transducer bar of claim 27, wherein said intermediate transducer exists substantially closer to said outermost transducer than said innermost transducer.

Regarding claim 29, Rost (abstract; fig. 10, col. 8, lines 35-46) transducer bar of claim 27, wherein said angular orientation of said innermost transducer is substantially larger than said angular orientation of said intermediate transducer.

Art Unit: 3663

Regarding claim 30, Rost (abstract; fig. 10, col. 8, lines 35-46) transducer bar of claim 29, wherein said angular orientation of said intermediate transducer is substantially larger than said angular orientation of said outermost transducer.

Regarding claim 31, Rost (abstract; fig. 10, col. 8, lines 35-46) transducer bar of claim 30, wherein said angular orientation of said innermost transducer is about eighty-three degrees, said angular orientation of said intermediate transducer is about sixty-nine degrees and said angular orientation of said outermost transducer is about fifty-six degrees.

Regarding claim 32, Rost (abstract; fig. 10, col. 8, lines 35-46) transducer bar of claim 23, further including a plurality of housings that angularly hold said each transducer relative to a surface of said transducer bar.

### ***Communication***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronnie Mancho whose telephone number is 571-272-6984. The examiner can normally be reached on Mon-Thurs: 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3663

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ronnie Mancho  
Examiner  
Art Unit 3663

12/10/05

  
JACK KEITH  
SUPERVISORY PATENT EXAMINER